

SPECIFICATION AMENDMENTS

Please amend the following Paragraphs of the specification to read as follows:

[0009] 2. The following ~~reaction~~ reaction is used: Under the action of dicyclohexyl carbodiimide (DCC), to let the carbobenzyloxy protecting alanine (Z-Ala) react with N-hydroxysuccinic imide (HOSu) at 20-25° C. for 5 hours, after filtering the dicyclohexylurea (DCU), proceed the synthesis in aqueous solution of sodium bicarbonate with non-protected Gln, the product is reduced by hydrogenation in methyl alcohol to remove the protective group, and then the alanylglutamine is obtained. (Literature: Katoh, T. Kurauchi, M. Eur, Pat. 311,057, 12 Apr. 1989) The reagents used in this method are expensive, it is difficult to remove the products of ~~[[DCC]]~~ DCU after reaction, and the process of production is more complicated.

[0011] 4. Acyl chloride is formed by activating the chiral reagent chloropropionic acid with SOCl₂, and then reacts with Gln in aqueous solution of NaOH, pH of the solution is maintained at 10. The product is ~~dichloropropionylglutamine~~ 2-chloropropionylglutamine, it reacts with liquid ammonia under a certain pressure, then the alanylglutamine is obtained. (Literature: Takahiro Sano, Toru Sugaya, Process Research and Development of 1-Alanyl-L-glutamine, a Component of Parenteral Nutrition, Organic Process Research and Development[[.]] , 2000, 4, 147-152). The raw material of this reaction is chiral reagent, it is higher in cost, in the synthesis procedure of acylchloride, reaction temperature is higher, and there are too many side reactions. So that when it is used in production, the production cost may be too expensive.

[0017] 4) [[Re]] Remove ~~which are hereby incorporated by reference in their entireties~~ move the N-terminal protecting group with deprotective reagent (VI), thus the alanylglutamine with a yield of 30%-65% is obtained,

[0019] (I) The N-terminal protected amino acid mainly is N-(O,O-dimethyl) phosphoalanine (DMP-L-Ala), N-(O,O-diethyl)phosphoalanine (DEP-L-Ala), N-(O,O-diisopropyl ~~diisopropyl~~) phosphoalanine (DIPP-L-Ala), N-(O,O-di-n-butyl) phosphoalanine (DBP-Ala), carbobenzoxyalanine (Z-L-Ala), (para-carbomethoxy) carbobenzoxyalanine (MZ-L-Ala), tertbutylcarbonylalanine (Boc-L-Ala) 2-(dibiphenyl) isopropylcarbonylalanine (Bpoc-L-Ala), etc.

[0031] 6) As the reaction is finished, two products are produced, the one is alanylglutamine required, and the other is byproduct (triphenylphosphine oxide). The triphenylphosphine oxide is a non-volatile solid, which is easy to be recovered, and may be restored as raw material as well;

[0036] Dissolve 20 mmol of hexachloroethane with 10 ml of dichloromethane, drop it into a mixed system composed of 10 mmol of N-(O,O-dimethyl) phosphoalanine, 20 mmol of ~~triphenylphosphine~~ triphenylphosphine and 20 ml of toluene. After reacting at 0° C. for 3 hours, drop it into a liquid mixture containing 25 mmol of glutamine, 20 ml of water and 60 ml of petroleum ether. While reacting, regulate pH to 10 with 20 mmol of potassium hydroxide and then with potassium carbonate successively, the reaction temperature is 0° C. the reaction time after dropping is 1.5 hours. Then acidify it to regulate pH=2.5 with concentrated hydrochloric acid. The aqueous phase, after concentrated, reacts with methanesulfonic acid at room temperature

for 20 hours. As the reaction is finished, add in 50 ml of ether, solids deposit, the product L-Ala-LGln is obtained with a yield of 45% by recrystallizing the solids with isopropanol-water.